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CORRES. CONTROL
OUTGOING LTR NO.

DOE ORDER# 4700.1
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DIST.	LTR	ENC
AMARAL, M.E.		
BURLINGAME, A.H.	X	X
BUSBY, W.S.		
BRANCH, D.B.		
CARNIVAL, G.J.		
DAVIS, J.G.		
FERRERA, D.W.		
FRAY, R.E.		
GEIS, J.A.		
GLOVER, W.S.		
GOLAN, P.M.		
HANNI, B.J.		
HARMAN, L.K.		
HEALY, T.J.		
HEDAHL, T.		
HILBIG, J.G.		
HUTCHINS, N.M.		
JACKSON, D.T.		
KELL, R.E.		
KUESTER, A.W.		
MARX, G.E.		
McDONALD, M.M.		
McKENNA, F.G.		
MONTROSE, J.K.		
MORGAN, R.V.		
POTTER, G.L.		
PIZZUTO, V.M.		
RISING, T.L.		
SANDLIN, N.B.		
SCHWARTZ, J.K.		
SETLOCK, G.H.		
STEWART, D.L.		
STIGER, S.G.	X	X
Primrose AL	X	X
Peterman BD	X	X
Keith SR	X	X
Quinn LA	X	X
O'Rourke TP	X	X
Roberts B	X	X
Mast EC	X	X
CORRES. CONTROL	X	X
~~ERPD~~ RECORD/080	X	2
TRAFFIC		
PATS/T130G		

CLASSIFICATION:

UCNI		
UNCLASSIFIED		
CONFIDENTIAL		
SECRET		

AUTHORIZED CLASSIFIER
~~DOCUMENT CLASSIFICATION~~
~~REVIEW WAIVER PER~~
~~CLASSIFICATION OFFICE~~
~~DATE~~

IN REPLY TO RFP CC NO:
None

ACTION ITEM STATUS
☑ PARTIAL/OPEN
☐ CLOSED

LTR APPROVALS:
TPO:

ORIG & TYPIST INITIALS
TPO:klc

RF-46469 (Rev. 6-94)

EG&G ROCKY FLATS

EG&G ROCKY FLATS, INC.
ROCKY FLATS PLANT, P.O. BOX 464, GOLDEN, COLORADO 80402-0464 • (303) 966-7000

January 11, 1995 95-RF-00252

Jessie M. Roberson
Assistant Manager for
Environmental Restoration
DOE, RFFO

PROPOSAL FOR RECONFIGURATION OF THE TERMINAL PONDS AND GROUNDWATER INVESTIGATION - SGS-015-95

Refs: (a) J. M. Roberson ltr (04232) to S. G. Stiger, Same Subject, November 17, 1994

(b) S. G. Stiger ltr (SGS-634-94) to J. M. Roberson, Same Subject, December 14, 1994

Action: None required - response and clarification to the above referenced letters

This letter is in response to your request for a recommendation on how to address groundwater and surface water issues for Rocky Flats Environmental Technology Site.

EG&G has identified the ultimate goal of this effort as follows: The overall goal is to integrate the groundwater into one unit in order to prevent underestimation or overestimation of risk to human health or the environment that may result from the current piecemeal approach. In addition, surface water can be addressed in a more efficient, cost effective manner. This achieves distinct advantages that include:

(1) The ability to decouple the groundwater from the current operable units (OUs) allowing early disposition of the surface areas at Rocky Flats Environmental Technology Site to support economic conversion and other land uses.

(2) The ability to assess risk on a sitewide basis which supports the comprehensive risk assessment for removal of Rocky Flats Environmental Technology Site from the National Priorities List.

(3) The ability to decouple the A and B series ponds requiring further action from OU 5 and OU 6 to allow final disposition for these OUs in a more timely fashion. This also ensures that the ponds are addressed when it is technically reasonable, thus ensuring cost effective decisions are made.

I. Recommendation for Rocky Flats Environmental Technology Site Groundwater.

RECOMMENDATION:

EG&G recommends that an OU be created to address groundwater.

Conceptually, an Operable Unit (OU) or an Individual Hazardous Substance Site (IHSS) incorporating all groundwater concerns at the Rocky Flats Environmental Technology Site would have many advantages. These advantages would come from the ability to deal with groundwater issues on a hydrogeologic basis without concern for the current OU project boundaries. This would eliminate any technical problems related to using current OU limits as artificial hydrogeologic boundaries.

A groundwater OU (GWOU) would encompass the area loosely defined as the Rocky Flats Environmental Technology Site plant boundary on the west, the subsurface divide between Rock Creek and Walnut Creek to the North, the subsurface divide between Woman Creek and the Smart Ditch drainage to the south and Indiana Avenue to the east. This would encompass groundwater for all operable units except OU3.

The responsibility for groundwater contamination, as well as immediate groundwater concerns would remain in OU1 and OU2 as currently scheduled. We recommend that the OU1 and OU2 Records of Decision (ROD) include groundwater; however the final GWOU ROD would consider all data from Rocky Flats Environmental Technology Site. OU1 data can also support an overall groundwater assessment without impacting the OU1 ROD process. The data from OU2 currently indicates that the plume is distinct enough to be addressed in the OU2 ROD. All data generated from OU2 investigation would be available to support the GWOU studies. A fringe benefit of this would be that the GWOU studies would validate the RODS from OUs 1 and 2 as well as the IM/IRA from OU4.

ADVANTAGES:

1. Using an OU instead of an IHSS allows more flexibility with respect to the area of study since OU boundaries are not clearly defined. It is our intent to push the point of compliance to the Rocky Flats Environmental Technology Site boundary.

2. This supports a more cost effective management approach by integrating current sitewide groundwater activities.

3. This provides a technically defensible basis for risk management decisions by eliminating the inefficiencies from multiple OU boundaries.

4. A groundwater OU would allow risk assessments for groundwater pathways to be performed in a more realistic manner concentrating on the drainages that constitute the major groundwater flow paths off plantsite (Woman and Walnut Creeks). This could apply to both human health and ecological risk assessments. In addition, monitoring systems could be designed based on groundwater flow pathways. Also, cleanup activities could proceed in a more logical manner. Remediation systems could be designed to intercept/treat contaminated groundwater from multiple sources, regardless of which OU they are currently assigned to.

5. A groundwater OU could also help bridge some potential gaps resulting from the changing activities at the Rocky Flats Environmental Technology Site. Any groundwater questions, concerns, or problems generated during general environmental cleanup or D&D activities could be delegated to this OU. This would eliminate questions of source location and which OU should handle these concerns.

6. In regards to sitewide or basin-wide groundwater modeling to support risk assessment studies, the current sitewide flow modeling project could provide the basis for these activities. Some expansion and augmentation of the groundwater flow model would be necessary before contaminant transport modeling could be performed. The amount of augmentation necessary would be dependent on the goals and needs of the risk assessment studies. Any additional, more detailed modeling that may be needed for remediation activities would likely be done on a more local scale. In some cases, this modeling could use local scale models previously developed for individual OUs (i.e., OU2).

7. Any immediate problems with groundwater identified during current OU assessments could be handled as PAMs or IM/IRAs and would likely support the groundwater OU final action. This does not preclude other appropriate early actions that might be identified during current investigations.

8. It needs to be recognized that final source and risk characterization of the groundwater is dependent upon source characterization of the IA. This approach frees up OUs 2, 4, 5, and 6 to proceed through the ROD process without being impacted by the IA schedule.

9. Many of the tasks of the sitewide groundwater monitoring program as well as the Well Abandonment Replacement Program (WARP) are similar to those tasks that would be a part of a sitewide groundwater OU. The current Well Evaluation Reports and Hydrogeologic Characterization Report already exist and would form the basis of the GWOU RFI/RI investigation. Many of the technical staff required for the work envisioned to be accomplished in the Phase I Groundwater OU are currently employed in these sitewide programs. We will also evaluate the cost reduction on other sitewide work packages.

10. There are no currently identified regulatory areas of concern. This should allow selected IHSSs to proceed through the closure process via the PAM approach, if appropriate, so this is not in conflict with the State's desires for more RCRA integration. The potential drawback would be the subdividing of the GWOU by the State into multiple IHSSs requiring multiple source and risk characterizations and defeating the goal of this effort.

11. The current OU-4 IM/IRA is designed to eliminate source contribution from the Solar Pond to the groundwater. The potential to decouple the groundwater from OU4 would allow OU4 to pursue a ROD after approval of the IM/IRA decision document.

12. This provides a clear driver to ensure continuation of funding.

SCHEDULE

A GANTT chart and resource-loaded preliminary schedule will be delivered to the Department of Energy, Rocky Flats Field Office (DOE, RFFO) on January 20, 1995.A three phased RFI/RI investigation is proposed. Phase I would be the compilation, data analysis, modeling and reporting of all historic information pertinent to the groundwater investigation. The report would be based on historic data generated from Sitewide and OU-specific activities and would include results from Fiscal Year (FY) 95 well installation activities.

Phase II would involve the assimilation of all OU RI investigations coupled with any additional Groundwater OU-specific RI investigations. The report would be finished after completion of all Industrial Area source characterization RI work and any additional work necessary for characterizing the groundwater OU.

Phase III would involve the assimilation of all additional data collected during activities conducted to support removal of Rocky Flats Environmental Technology Site from the NPL. The report would be completed at the cessation of those activities.

There are a number of critical milestones that will have to be factored into a groundwater OU. Among the first would be the agreement by the stakeholders modify the IAG or to include the GWOU into Rocky Flats Cleanup Agreement (RFCA).

Other milestones that would be tied to a groundwater OU include:

- Draft Phase I Groundwater OU RFI/RI Report would be linked to the completion of the FY 95 Well Abandonment and Replacement Program (WARP), second or third quarter sampling cycle and operable unit related drilling programs.

- Draft Phase II Groundwater RFI/RI Report would be linked to completion of all Remedial Investigation related groundwater characterization schedules.

- Draft Phase III Groundwater RFI/RI Report would be linked to completion of the activities necessary to remove Rocky Flats Environmental Technology Site from the National Priorities List (NPL).

- A final ROD could not be achieved until all activities that support removal of Rocky Flats Environmental Technology Site from the NPL are complete. This ROD could be coupled with the final comprehensive ROD for Rocky Flats Environmental Technology Site that supports delisting from the National Priorities List. The potential impact here is that if D&D activities are included under the RFCA, removing Rocky Flats Environmental Technology Site from the NPL may not occur until after D&D.

A GANTT chart is currently being developed and will be delivered to DOE/RFFO on January 20, 1995. The major activities for this schedule are listed in Attachment 1.

RECOMMENDATION:

II. Recommendation on the A, B, and C Series Ponds - EG&G recommends breaking out the A, B (OU6, Walnut Creek Drainage) and C (OU5, Woman Creek Priority Drainage) series ponds that will require further action beyond the RFI/RI into a stand alone Individual Hazardous Substance Site (IHSS) that would be transferred to the Industrial Area consolidated operable unit.

The media of concern in the ponds is the sediment. Ponds A1, A2, and B1 through B4 have sediments that contain constituents exceeding Preliminary Proposed Remediation Goals (PPRGs) for residential soils. These ponds may require an Interim Measure/Interim Remedial Action (IM/IRA) or a final action, other than no action, and should be transferred to the Industrial Area (IA) OUs after the Feasibility Study's Technical Memorandum 1, Remedial Action Objectives (RAO) and Preliminary Remediation Goals (PRG) has been approved by the regulatory agencies. The current schedule for completion of the OU5 Feasibility Study/Technical Memorandum 1 is May 1995, and for OU6 the completion date is April 1995.

Transferring the ponds with contaminated sediments to the IA OUs would allow the remaining IHSSs in OU 5, Woman Creek Drainage and OU6, Walnut Creek Drainage to go to a final Record of Decision (ROD) earlier than units within the Industrial Area (IA).

RECOMMENDATION (continued)

Ponds A3, A4, B5, C1 and C2 and the pond at Walnut Creek and Indiana contain uncontaminated sediments and are clear candidates for no further action. These ponds should remain in their respective OUs. All ponds should stay in place for flood and spill control through D&D.

ADVANTAGES:

(1) We see no clear advantages to grouping the ponds into a separate OU; rather we see that this option would increase management and administrative costs with no technical or regulatory advantage.

(2) This strategy enables us to close the uncontaminated ponds in OUs 5 and 6 in accordance with the current work plan and schedule for those operable units. Transferring the ponds with contaminated sediments to the Industrial Area at the completion of the Feasibility Study Technical Memorandum 1 provides a logical technical basis for confirming which ponds should be transferred and minimizes the disruption of current activities in OU5, OU6, and the Industrial Area.

(3) Our evaluation of this recommendation identified no significant regulatory concerns.

If you have any questions regarding our recommendations, please do not hesitate to contact me on extension 8540 or digital page 6150.

S. G. Stiger, Director
Environmental Restoration Program Division
EG&G Rocky Flats, Inc.

ECM:cb

Orig. and 1 cc - J. M. Roberson

cc:
M. N. Silverman - DOE, RFFO

List of activities to be incorporated into the GWOU schedule.

Draft Phase I RCRA Facilities Investigation/Remedial Investigation (RFI/RI) Groundwater OU Workplan

Site Characterization
Field Sampling Plan (FSP)
Human Health Risk Assessment (HHRA)
Environmental Risk Assessment (ERA)
Quality Assurance Addendum (QAA)

- Regulatory Agency review cycle of the Phase I Workplan
- Final Phase I RFI/RI Groundwater OU Workplan
- Regulatory Agency review and approval cycle of the Phase I Workplan
- Groundwater monitoring program
- Compilation of groundwater data
- Implementation of the Phase I FSP
- Data analysis, modeling and reporting
- Submittal of draft Phase I RFI/RI Report
- Regulatory review cycle
- Submittal of Final Phase I RFI/RI Report
- Regulatory final review and approval cycle
- Final submittal of Final Phase I RFI/RI Report

- **Draft Phase II RFI/RI Groundwater OU Workplan**
- Regulatory Agency review cycle of the Phase II Workplan
- Final Phase II RFI/RI Groundwater OU Workplan
- Regulatory Agency review and approval cycle of the Phase II Workplan
- Groundwater monitoring program
- Implementation of the Phase II Field Sampling Plan
- Data analysis, modeling and reporting
- Submittal of draft Phase II RFI/RI Report
- Regulatory review cycle
- Submittal of Final Phase II RFI/RI Report
- Regulatory final review and approval cycle
- Final submittal of Final Phase II RFI/RI Report

- **Draft Phase III (FINAL) RFI/RI Groundwater OU Workplan**
- Regulatory Agency review cycle of the Phase III Workplan
- Final Phase III RFI/RI Groundwater OU Workplan
- Regulatory Agency review and approval cycle of the Phase II Workplan
- Groundwater monitoring program
- Implementation of the Phase III Field Sampling Plan (if required)
- Data analysis, modeling and reporting
- Submittal of draft Phase III RFI/RI Report
- Regulatory review cycle
- Submittal of Final Phase III RFI/RI Report
- Regulatory final review and approval cycle
- Final submittal of Final Phase III RFI/RI Report

- **Feasibility Study**
- **Proposed Plan**
- **Responsiveness Summary**
- **ROD**